



# Troubleshooting the Dzero Grid

## Grid Troubleshooting Workshop

Chicago, Illinois

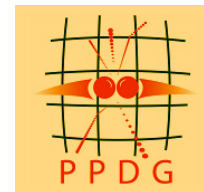
Lee Lueking

Fermilab Computing Division



December 11, 2002

[d0db.fnal.gov/sam](http://d0db.fnal.gov/sam)





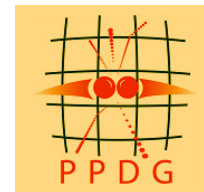
# What is the Dzero Data Grid?

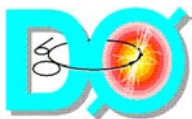
- Operational since early 2000
- 570 registered users
- Two dozen active sites, 60 registered stations (~30 in operation) distributed worldwide, constantly growing and changing.
- Hundreds of “analysis projects” (Data Set + station) each with 1 or more “consumers” (process + application).
- Several thousand file transfers daily



December 11, 2002

[d0db.fnal.gov/sam](http://d0db.fnal.gov/sam)





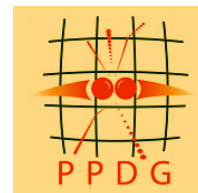
# Operations Summary

- Offline Shift Coordinator
- Two shifts per day – Euro and Ameri – for (roughly) 16/7 coverage. (roughly 30 shifters)
- Nine experts on call with pager rotation
- Reporting channels: sam-admin, sam-user mail lists. Might use bugzilla in future
- Rough breakdown:
  - 60% of problems are installation and configuration related
  - 20% are rookie user questions
  - 20% are operational problems or bug discovery



December 11, 2002

[d0db.fnal.gov/sam](http://d0db.fnal.gov/sam)



# SAM NameService: Registered SAM DbServers

## D0 Production

Name service up since: 12 Nov 2002 19:44:46

This page generated 08 Dec 2002 13:33:11



Server Name	Host	Version	Up Since
SAMDbServer.central_analysis_prd:SAMDbServer (connected to DOOFPRD1)	d0oral.fnal.gov	v4_4_1_3	18 Nov 2002 20:27:05
SAMDbServer.dlsam_prd:SAMDbServer (connected to DOOFPRD1)	d0oral.fnal.gov	v4_4_1_3	26 Nov 2002 13:59:10
SAMDbServer.web_prd:SAMDbServer (connected to DOOFPRD1)	d0oral.fnal.gov	v4_4_1_3	12 Nov 2002 19:45:28
SAMDbServer.user_prd:SAMDbServer (connected to DOOFPRD1)	d0oral.fnal.gov	v4_4_1_3	20 Nov 2002 11:40:39
SAMDbServer.station_prd:SAMDbServer (connected to DOOFPRD1)	d0oral.fnal.gov	v4_4_1_3	12 Nov 2002 19:45:18
SAMDbServer.prd:SAMDbServer (connected to DOOFPRD1)	d0oral.fnal.gov	v4_4_1_3	12 Nov 2002 19:45:16

Total number of servers seen:

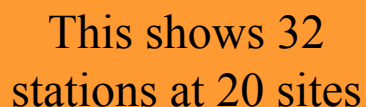
For further information, contact [sam-admin@fnal.gov](mailto:sam-admin@fnal.gov).

Server  
Name

Machine  
Name

Server  
Version

Date  
Started






## D0 Production Environment

**This page generated on 08 Dec 2002 13:17:04**

### Other Sam Diagnostics

### SAM Stations:

**Monitor Level: Critical**

	<a href="#">datalogger-d00la</a>	unknown host	unknown	unknown
	<a href="#">datalogger-d00lb</a>	d00lb-gb-1.fnal.gov	v4_2_1_12	04 Dec 2002 08:54:45
	<a href="#">datalogger-d00lc</a>	unknown host	unknown	unknown

**Monitor Level: High**

<a href="#">central-analysis</a>	d0mino.fnal.gov	v4_2_1_20	03 Dec 2002	09:58:52
<a href="#">fnal-farm</a>	d0bbin.fnal.gov	v4_2_1_19	04 Dec 2002	11:31:35

**Monitor Level: Normal**

	<a href="#">cab</a>	d0mino-sam.fnal.gov	v4_2_1_20	03 Dec 2002 09:59:02
	<a href="#">cab-test</a>	no smaster/fss		
	ccin2p3-analysis			
	ccin2p3-production			
	<a href="#">cinvestav-station</a>	higgs.fis.cinvestav.mx	v4_2_0_3	16 Oct 2002 17:49:28
	<a href="#">clued0</a>	flotsam-clued0.fnal.gov	v4_2_1_20	12 Nov 2002 11:16:15
	common-archive			
	<a href="#">csuf_hep2-station</a>	no smaster/fss		
	d0-ires			
	<a href="#">d0karlsruhe</a>	unknown host	unknown	unknown
	<a href="#">d0nevis-station</a>	no smaster/fss		
	<a href="#">hoeve</a>	schuur.nikhef.nl	v4_2_0_3	02 Dec 2002 02:17:55
	<a href="#">imperial-lesc</a>	unknown host	unknown	unknown
	<a href="#">imperial-test</a>	gw29.hep.ph.ic.ac.uk	v4_2_1_17	02 Dec 2002 09:23:23
	<a href="#">IndianaUniversity</a>	d0svr2.physics.indiana.edu	v4_2_0_3	04 Dec 2002 09:31:18



# SAM Monitor Statistics



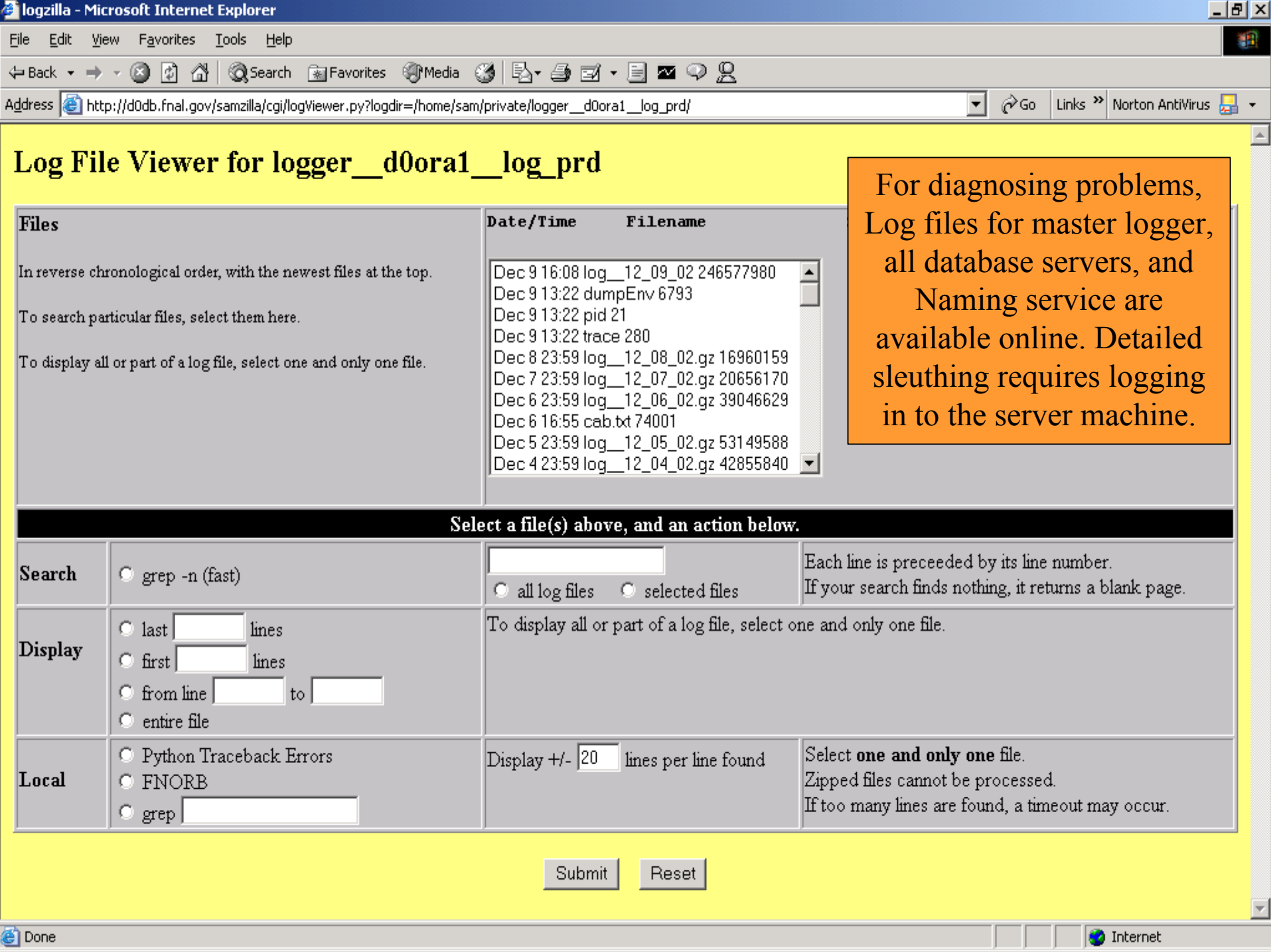
## File Transfer Error Summaries - Daily

This data represents SAM file transfers that encountered some type of error, summarized by error number on a daily basis. In many cases, SAM will retry the file transfer  $n$  times before abandoning all hope. At this time, the method for collecting this data is a simple UNIX 'grep' for a specific string in the consolidated log files.

For a description of the errors and column headings, click [here](#)

Last updated - 12/08/02 11:55

Log File	<a href="#">Error Number</a>										Transfers
	2	5	13	17	28	32	77	78	encp	traceback	
log__12_08_02	0	0	0	0	0	0	0	0	0	0	2700
log__12_07_02	11	0	0	0	0	3	0	0	0	0	5836
log__12_06_02	1	0	0	0	0	2	0	0	0	0	6324
log__12_05_02	1	0	0	0	0	3	0	0	0	2	6068
log__12_04_02	0	0	0	0	0	0	0	0	0	2	3500
log__12_03_02	4	0	0	0	0	0	0	0	0	0	2910



[Shift Log Categories](#)

## SAM Shift Reports

[Shift Log Entry](#)

Sort by: <input checked="" type="radio"/> date <input type="radio"/> shifter	Reports since: 01-Dec-2002	Categories: <input checked="" type="radio"/> active <input type="radio"/> all	<input type="button" value="Reload page"/>
---	-------------------------------	--	--

Shifter	Shift Report	central analysis station	sam db servers	enstore history	calibration db servers	online station	remote processing stations	other remote stations	ce an
bloch 12/05/2002 07:38:24	datalogger b and c green (since yesterday in fact) <ul style="list-style-type: none"> <li><i>enstore history</i> : prm584 back online: the tape was found to have a bad external barcode label. This caused an error when there was an attempt to use the tape. The label was replaced with a new one.</li> <li><i>remote processing stations</i> : ccin2p3 always red</li> </ul>								
bloch 12/04/2002 07:39:14	datalogger-d0olb is red since yesterday maintainance... <ul style="list-style-type: none"> <li><i>enstore history</i> : I advertised enstore about the tape prm584 still on noaccess and they are going to test it. □. There is one mover down.</li> <li><i>remote processing stations</i> : ccin2p3 is red due to a bug in the command nohup of the new afs version (open afs), they are investigating. karlsruhe was temporary red due to filesystem problems. no news from the other six red</li> <li><i>user issues</i> : problems with writing disk on umdzero, but this station is down...</li> </ul>								